

PATENT CLAIMS

1. A microprocessor controlled toy building element (101, 501) comprising
5 a microprocessor (102, 507) which can execute instructions in the form of a program stored in a memory (117, 509);
10 a display (104, 508) integrated in the toy building element (101, 501);
coupling means for coupling with building elements which
can be moved by manoeuvring means, said manoeuvring means
15 being controllable in response to the instructions,
characterized in that
the display (104, 508) comprises a plurality of icons
20 (204, 205, 206, 207, 208) which each represent instructions for the microprocessor (102, 507), and which can be activated by a user for programming of the microprocessor, and by
25 signalling with a first one of the plurality of icons, said first icon representing instructions which the microprocessor is executing.
30 2. A microprocessor controlled toy building element according to claim 1, characterized in that a first type of icons (204, 205, 206) is configured to illustrate patterns of movement.

3. A microprocessor controlled toy building element according to claim 1 or 2, characterized in that a second type of icons (207, 208) is configured to illustrate modifications of patterns of movement.

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4. A microprocessor controlled toy building element according to any one of claims 1-3, characterized in that the toy comprises means for generating a first set of instructions comprising parameters upon activation of a first type of icons (204, 205, 206), which instructions and/or parameters may be modified by activation of a second type of icons (207, 208).

15 5. A microprocessor controlled toy building element according to any one of claims 1-4, characterized in that the microprocessor (102, 507) is adapted to receive signals from electrical and/or electronic units.

20 6. A microprocessor controlled toy building element according to claim 5, characterized in that a first group of rules is conditioned by a first group of signals, and that a second group of rules (R1-R6) is conditioned by a second group of signals.

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7. A microprocessor controlled toy building element according to any one of claims 1-7, characterized in that instructions corresponding to one icon implement one rule by controlling the manoeuvring means in response to signals from electrical and/or electronic units.

30 8. A microprocessor controlled toy building element according to any one of claims 1-7, characterized

- i z e d in that the microprocessor executes rules (R1-R6) in the form of instructions which control units,
said rules being conditioned by a plurality of signals,
5 said rules being arranged in an at least partly prioritized order,
said prioritized order indicating which one of several
10 rules is to be allowed to control a unit,
said order being arranged according to the signals by
which they are conditioned.
- 15 9. A microprocessor controlled toy building element according to any one of claims 1-8, c h a r a c t e r - i z e d in that the toy comprises keys (113, 114, 115) integrated in the toy, said keys being capable of activating the icons.
20 10. A microprocessor controlled toy building element according to any one of claims 1-9, c h a r a c t e r - i z e d in that the toy comprises communications means (505, 504) for receiving commands which can be converted
25 into a program that can be executed by the microprocessor.
11. A microprocessor controlled toy building element according to any one of claims 1-10, c h a r a c t e r -
30 i z e d in that the toy comprises communications means for transmission (505, 504) of commands.
12. A microprocessor controlled toy building element according to any one of claims 1-11, c h a r a c t e r -

i z e d in that the toy comprises communications means (54) for transferring information via a light guide (503).

5 14. A microprocessor controlled toy building element according to any one of claims 1-13, c h a r a c t e r -
i z e d in that the toy comprises an elongated light
guide (503), through which visible light may be transmit-
ted in its longitudinal direction, said light guide being
10 adapted to allow part of the light transmitted to escape
through its sides.

15. A toy building set according to any one of claims 1-
14, c h a r a c t e r i z e d by comprising toy build-
15 ing elements with coupling means for mutual coupling.